determines the size, shape and palatability of a loaf. For many years it was believed that a strong wheat could not be grown on English soils or in the moist English climate. Wheats imported for experimental purposes from Canada, Russia, Hungary and Turkey all lost their quality within a few years. But one wheat, Canadian Red Fife, has been proved to retain its strength unimpaired after 21 successive years' growth in England. Professor R. H. Biffen, working on Mendelian lines, has proved that strength is a dominant characteristic, and by crossing Red Fife with high-yielding English wheats has already given the farmer Yeoman wheat, which without admixture of foreign wheats will yield satisfactory bread. But, in Professor Biffen's own words, the sooner Yeoman is off the market the better, for a series of new wheats believed to combine the best characteristics of Canadian and English varieties, and adapted to different types of soils, are now growing at the Cambridge Plant Breeding Institute, and it is hoped to market the first of these through the National Institute of Agricultural Botany in the autumn of 1924. If the promise of these wheats materializes, English wheat will be lifted from the category of kinds to be bought for breadmaking only when the price is low into the category of kinds desired and essential. This change would revolutionize the financial prospects of English wheat-growing.

Of recent years the great development of agricultural education and research in Great Britain has attracted considerable attention throughout the empire. The number of research workers spending some time at centers such as the Rothamsted Experimental Station is rapidly increasing. In the majority of cases they are sent officially by the dominion government concerned. A further example of this cooperation is furnished by the recent departure of Sir John Russell, director of the Rothamsted Experimental Station, on a special mission to the Sudan. He will be associated with Dr. H. Martin Leake, director of agriculture for the United Provinces of India, in advising the Sudan Government on its agricultural policy. In view of the enormous possibilities for growing cotton in the Sudan, agricultural research work will be mainly concerned with cotton. The first instalment of the great irrigation scheme in the Gezira plain south of Khartoum is expected to come into operation in the autumn of 1925. At this stage 300,000 acres will be put under irrigation, of which 100,000 acres will be under cotton; but the total scheme is capable of development over an area of 3,000,000 acres. In approaching Sir John Russell and Dr. Leake, the Sudan government has been actuated by the desire to get the best possible advice as to the organization and direction of the agricultural research work which should be undertaken in connection with this project, which may ultimately produce 1,000,000 bales of cotton a year. It is hoped that the Empire Cotton Growing Corporation will cooperate with the Sudan government in the research work to be carried out, and that this work can be coordinated with a general plan for research work on cotton problems to be organized throughout the British Empire.

BRITISH EXPEDITION TO SAMOA

THE research expedition arranged by the London School of Tropical Medicine, which is going out to Samoa to study the prevention of filariasis and associated diseases, especially elephantiasis, according to the London *Times*, has left Southampton in the *Athenic* for New Zealand, *via* Panama.

It consists of Dr. P. A. Buxton, the well-known zoologist, entomologist and medical man; Mrs. Buxton and Mr. G. W. Hopkins, of Downing College, Cambridge. In New Zealand, they hope to add to their company one or two New Zealand medical students, who will thereby be given opportunity of studying some of the problems of disease which the government of their dominion will have to face in connection with its mandate over such areas as Samoa.

It is hoped to be able to demonstrate that the infecting of man (animals are never infected) by the mosquito "carrier" of the filaria can be prevented by clearing away all the undergrowth round the masses of coconut palms, destroying the broken shells, thrown on one side in making the copra, which harbor water, and by destroying the rhinoceros beetle, which bores into the tree holes that retain moisture in which the mosquito breeds. The natives meanwhile will be carefully supplied with water from uncontaminated cisterns.

Elephantiasis is largely responsible for the apathy and lack of initiative on the part of the Polynesian, making necessary the introduction of Chinese and Indian labor for developing many natural resources. Filariasis also has a very serious effect on the birth rate. So far no drug is known which will destroy without killing the patient the hair-like worm (the males are 1½ inches long and the females 3 inches) which lives in the lymphatic glands.

The influenza epidemic of 1918 carried off nearly a third of the people of Samoa, tuberculosis is increasingly attacking men and women of marriageable age, and measles is usually fatal. All these problems are also to be studied by the expedition, as well as the dysentery epidemic which has been particularly bad this year. It is hoped to be able to arrange for the training of two or three native women in each village for infant welfare work. Especially important will be the researches into the effect of high atmospheric temperatures and moisture on the European. Dr. Buxton is also expected to make a study of the birds of

Samoa, and it is hoped he will be able to bring home to London a "didunculus," the first cousin to the extinct dodo, which still survives in one area. A careful selection of entomological specimens will also be made.

THE COLLEGE OF DENTISTRY OF THE UNIVERSITY OF CALIFORNIA

RECOGNITION of the work of the college of dentistry of the University of California is shown by the grant to it for three successive years, by the Research Commission of the American Dental Association, of funds for carrying on special investigations. For 1922–23, according to a statement made by Dr. Guy S. Millberry, dean of the College of Dentistry, the principal grant amounts to $2,000 and is awarded for research to be carried on by Dr. John A. Marshall, associate professor of biochemistry and dental pathology, in the influence of diet and nutrition on the development of the teeth. Dr. Marshall will also with the aid of this grant continue certain inquiries into the "salivary factor in dental decay" and into "dental erosion."

In addition, the research commission has made a grant of $1,500 to the university research group now carrying on experimental work in San Quentin Prison. This study is concerned with infections of the oral cavity. The investigators include Dr. Vance Simonton, associate professor of operative dentistry, Dr. W. Hanford and Dr. W. Fleming, instructors in preventive dentistry, Dr. C. O. Patten and Dr. C. Westbay, instructors in operative dentistry, for the College of Dentistry. Particularly concerned, also, in the chemical side of the research is Dr. Guy W. Clark, assistant professor of pharmacology, while similarly engaged on the bacteriological side are Associate Professors T. D. Beckwith and I. C. Hall.

The College of Dentistry will next January begin to use the income from a fund of $10,000 to meet the expense of an annual course of lectures, by noted authorities, on preventive dentistry. These lectures will at first be given in San Francisco, but as the fund increases through the efforts of the Alumni Association of the college they will be repeated in other centers of population. According to Dean Millberry the northern branch of the Dental Alumni Association is now committed to the raising of a quota of $5,000 to add to the $10,000 already in the hands of the Board of Regents.

THE MILBANK MEMORIAL FUND

IN the report of the Milbank Memorial Fund, established by the late Mrs. Elizabeth Milbank Anderson, recently issued, it is stated that $2,000,000 has been appropriated for health demonstrations in three typical communities with a population of half a million.

Under the plan announced the fund will attempt to demonstrate, by cooperation with agencies in these communities, whether the extent of sickness can be materially diminished by the intensive application of known health measures, and mortality rates further reduced; and whether these results can be achieved in a relatively short period of time and at a per capita cost which the communities will willingly bear.

"This project of the Milbank Memorial Fund, known as the New York Health and Tuberculosis Demonstrations, will be carried on in three localities in New York State typical of metropolitan, city and rural communities in the country at large. It will be conducted under the general supervision of a group of well-known leaders in public health and social work. Its purpose is to determine which diseases more readily yield to concerted attack, to what extent tuberculosis can be further reduced, whether the low infant mortality rate of 50 per 1,000 born attained in many progressive communities can be generally substituted for the rate of 100 or more still prevailing in parts of the United States; what preventive methods are most effective in controlling disease—in short, to ascertain what can be accomplished by the intensive application of public health measures in the fields of physical and mental, social and industrial hygiene. A record will be kept of the exact cost of each specific project and every effort made to keep the cost down to a minimum consistent with efficiency."

Actual work has been started in Cattaraugus county, with a population of about 72,000 and in the city of Syracuse, which has a population of about 175,000. The metropolitan district, though not yet definitely located, will probably be a section of New York City, with a population of about 200,000. The Board of Directors of the fund has set aside $325,000 annually for these projects.

The general supervision of the demonstrations will be in the hands of a technical board consisting of Dr. James Alexander Miller, of the College of Physicians and Surgeons; Dr. Linsly R. Williams, managing director of the National Tuberculosis Association; Dr. Livingston Farrand, president of Cornell University; Homer Folks, secretary of the State Charities Aid Association; Bailey B. Burritt, director of the New York Association for Improving the Condition of the Poor, and John A. Kingsbury, secretary of the fund.

ATTENDANCE AT SCIENTIFIC MEETINGS

THE following resolution was adopted by the Board of Managers of the Washington Academy of Sciences at a meeting held October 29, 1923:

Whereas, The work of scientific men has contributed enormously to the welfare of the human race and espe-